Assessing safety and quality in mental health apps: The App Checker tool

Marie Paldam Folker, Head of Department at Centre for Telepsychiatry, mpf@rsyd.dk

What is Centre for Telepsychiatry?

We are a development and research centre within the Mental Health Services in the Region of Southern Denmark.

We collaborate with patients, mental healthcare professionals, researchers and IT developers to improve mental health outcomes and service delivery through the use of digital technologies.

Centre for Telepsychiatry

INTERNET PSYCHIATRY

VIDEO CONSULTATIONS

MINDHELPER.DK

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DIGITAL SELF-MONITORING

ENTER

How are apps used in the Mental Health Care Services in RSD?

- Self-management

- Monitoring of symptoms

- Psychoeducation

- Treatment (CBT, DBT, MI)

- Communication and shared decision making

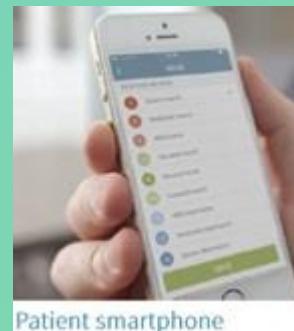# Self help and clinically integrated apps used in the Mental Health Care Services
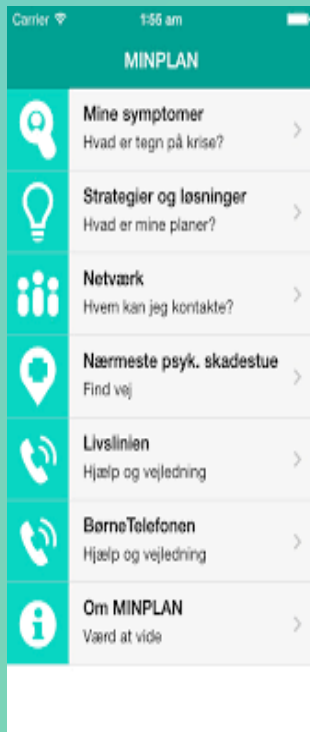
Min Plan

tiimo

Digital self monitoring

MONSENSO

Patient smartphone

Clinical web portal

Back-end data analysis

MindApps survey results: Are patients keen on using apps?

36 % of the patients use apps in handling their mental health
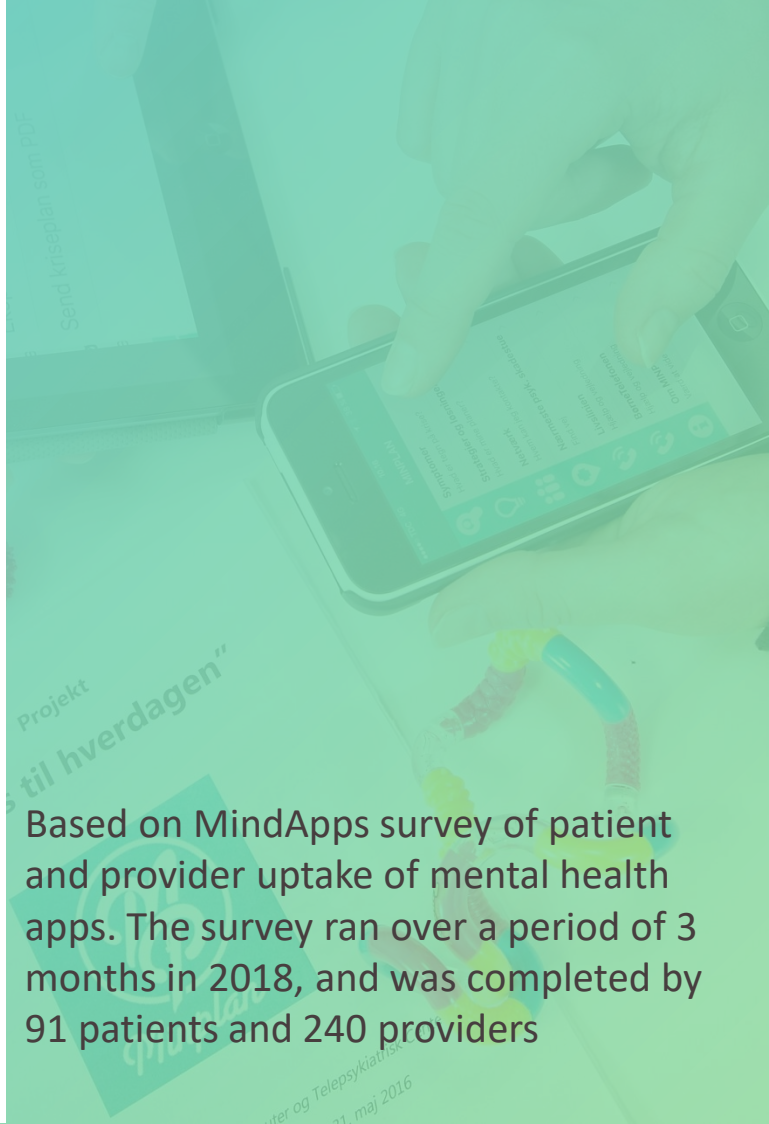
What patients see as the main benefits of using apps:
- Support when the need arises (78%)
- Easy access to support and treatment (63%)
- Can be customized as needed (59%)

What patients see as the main disadvantages:
- May be hard to find the right app (66 %)
- Concerns over costs and commercial interests (56 %)
- Risk of misuse of data (50 %)
- May be hard to figure out if it works (41 %)

To get started using apps patients demand:
- Better knowledge about which apps they can use (70 %)
- That their therapist encourages them to use apps (21 %)
- Better guidance on using apps (18%)
- A higher quality in apps (16%) and greater security in apps (16%)

Based on MindApps survey of patient and provider uptake of mental health apps. The survey ran over a period of 3 months in 2018, and was completed by 91 patients and 240 providers

MindApps survey results: Are clinicians keen on using apps?

39 % of the providers use apps in support and treatment interventions

73 % would like to use apps in support and treatment interventions

Providers mostly use apps for:
- An active support tool in the course of treatment (66%)
- Support in everyday life (64%)
- Prevention (42%)

Providers demand:
- 60% of the providers find information about apps insufficient
- 66 % ask for better knowledge about which apps they can use to get started
- 51 % ask for better guidance to get started

Based on MindApps survey of patient and provider uptake of mental health apps. The survey ran over a period of 3 months in 2018, and was completed by 91 patients and 240 providers

Challenges in using apps for mental health

- High number of mental health apps - low evidence for mental health app outcomes
- The app market is mostly unregulated with low protection of personal data
- Provider distrust due to lack of evidence-base and concerns about privacy
- Poor usability and poor app design failing to support people in managing their mental health
- Low engagement with mental health apps among service users

# Mindapps.dk – an online library of mental health apps

Development of the App Checker tool

Aim: To guide patients and clinicians to make informed choices about apps

How: Accessible, adaptable and interactive tool for assessment of privacy, background information and quality

Sources of inspiration:
- MARS (Mobile Application Rating Scale) (AU)
- KNMGs Medical App Checker (NL)
- mHealth App Assessment Guidelines (EU)
- Danish Medicines Agencies decision model for software and apps (DK)
- App assessment UK – National Institute for Health and Care Excellence (NICE) og National Information Board (UK)
- APA app evaluation framework
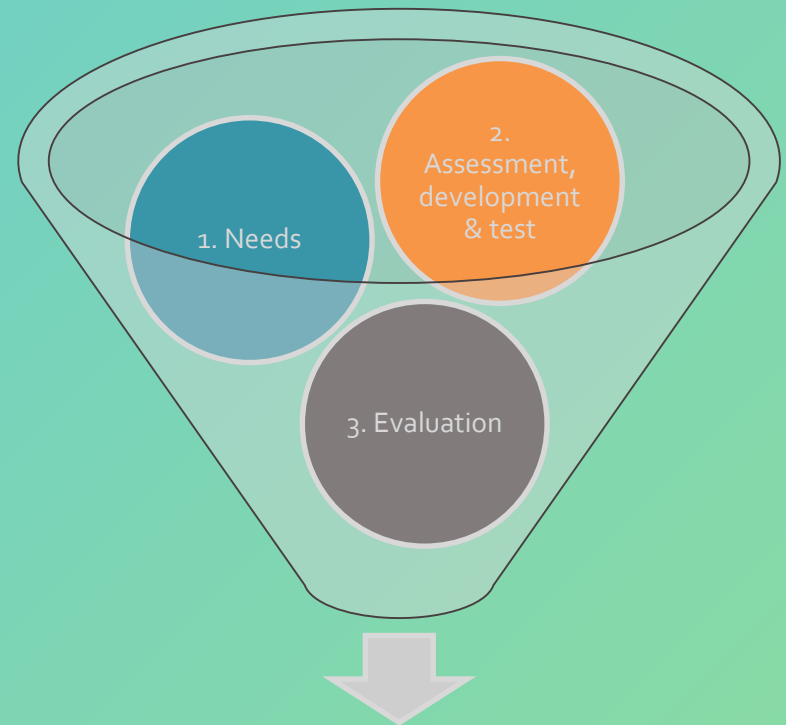
The App Checker: 3 steps

1. App information

2. Assessment of security and privacy

3. Assessment of quality

The App Checker

The App Checker step 1: App information

- Name of app and app developer
- Price
- Language
- Operating system and app version
- Target group and intended age group
- Type of developer

The Λpp Checker

The App Checker step 2: Security and privacy assessment

1. Assesment of risk category based on the complexity of collected sensitive data and integration with other devices and services

2. Privacy decision tree:
- 1-10 questions based on complexity of the app
- Privacy and CE-marking is covered
- Guidance to further information depending on the complexity of the app

MindApps
Apps til psykiske vanskeligheder

Apps   Brug af apps   Apptjekkeren   Om MindApps   Kontakt os   Brugerundersøgelse

Søg

Risk assessment

Tick the category that matches the app. If the app matches two or more categories choose the category with the highest value.

- R1 - An app with no registration of personal data, e.g. an app with exercises or mindfulness sessions.
- R2 - An app with notifications, reminders or alarm functionalities
- R3 - An app with administrative functions such as bookings or EHR-notes
- R4 - An app with communication functionality; e.g. videoconferencing, email, sms or social forums.
- R5 - An app with integration to wearables, such as wristbands, pulse trackers, or medical devices such as blood pressure monitors that transmits data to another device.
- R6 - An app with notifications or reminders about medicine dosage.
- R7 - An app with registration of health data.
- R8 - An app with registration of health data, that is processed and displayed for therapists, e.g. in graphs, diagrams or scores.

Is the app collecting personal data?

- Yes
- No

Read more about personal data by clicking here

Can your data and account information be handed over to you and deleted by request or termination of use?

- Yes
- No

The App Checker step 3: Quality assessment

4 categories:
- Transparency
- Effectiveness
- Reliability
- Usability

3 questions in each category
Each question is scored from 1-3
The final score is based on the average score

Apps presented on MindApps.dk need to have a minimum score of 1.5. Maximum score is 3.0

Every assessment on MindApps.dk is based on assessments from min. 3 clinicians/specialists.

How is the support level of the app?

Most developers describe if they provide support to users and to what extent. Information can typically be found in the app, in the app store or on the website of the app/developer.

○ 1. No support is provided.

● 2. Support is provided, but without a specific time frame for response.

○ 3. Support policy is thoroughly described and support is provided with a short time frame for response.

Effectiveness

Has the app any documented effect?

To what extent has the app been tested ? It will typically be described in the app, in the app store or on the website of the app/developer. If you assess an app without the need for a clinical trial, e.g. an information app, tick option no. 2

○ 1. The app has not been tested

● 2. The app has been tried out in an uncontrolled pilot

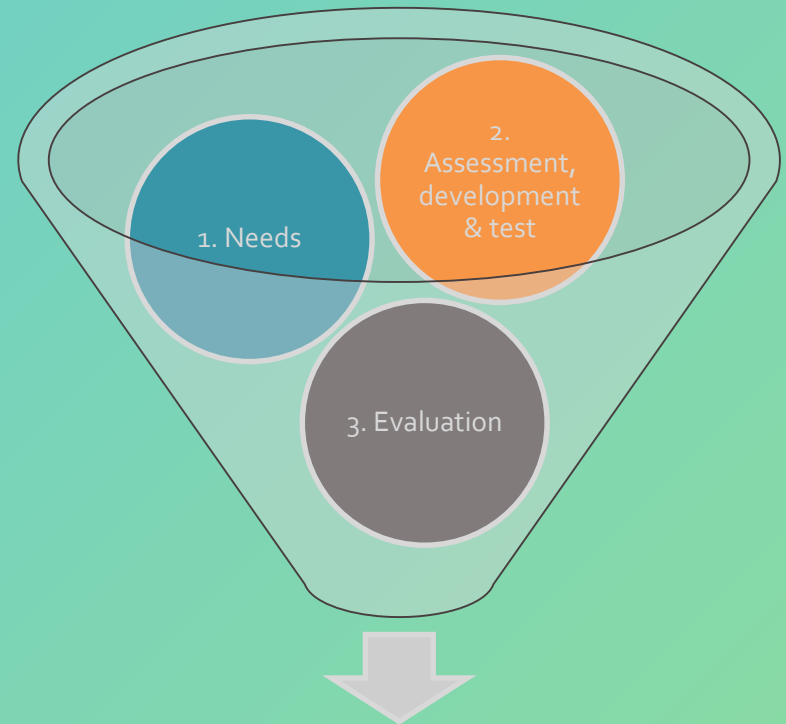○ 3. The app has been tried out in a controlled study.

Is the app based on a thoroughly described and well documented clinical method?

It will typically be described in the app, in the app store or on the website of the app/developer if the app applies a clinical method, e.g. cognitive behavioural therapy. If clinical method is irrelevant for the app you are

Moving forward with using mental health apps

- Improving app assessment methodologies – the App Checker tool as a first step

- Close collaboration with researchers strengthening the evidence-base for using mental apps

- Development of practical guidelines for using apps and for integrating apps into clinical care

- Continuous engagement with patients, clinicians and app developers to identify unmet needs for subsequent design, testing and implementation

Questions?